

**Epsom and Ewell**  
**Local Plan** 2022-2040



# Sequential Test Regulation 18

January 2023

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## 1 Introduction

- 1.1 This document has been prepared to support the Epsom & Ewell Local Plan Regulation 18 consultation. The purpose of this document is to demonstrate that sites which may be potentially allocated for development in areas of flood risk are appropriate in the context of the Sequential test. This is required as part of the National Planning Policy Framework (NPPF) and accompanying National Planning Practice Guidance (NPPG).
- 1.2 The aim of the Sequential Test is to steer developments to areas of lowest flood risk from all sources (while prioritising Flood Zone 1) with exceptions made only where there are overriding sustainability reasons for allocation.
- 1.3 Sites where an exception is made must then pass the Exception Test to show that they can be developed safely without increasing offsite flood risk. Only on passing both the Sequential Test and the Exception Test should a site be allocated.

## 2 Policy Context

- 2.1 The NPPF provides the policy framework in relation to development and the allocation of development sites in areas at risk of flooding. The key policy message is to guide new housing and employment development to areas with the lowest probability of flooding applying the Sequential and Exception tests as appropriate. The suitability of a particular development should be determined by taking into consideration the Flood Zones (as defined by the Strategic Flood Risk Assessment (SFRA) and Environment Agency (EA)), the flood risk vulnerability of the land use proposed and other sources of flooding. Where it is not possible to locate new development in areas of lowest flood risk, then clear justification for any allocations must be provided stating the sustainability criteria that are believed to outweigh the flood risk issues of the site. Where applicable, these sites will also need to pass the Exception test in order to demonstrate that the proposed development can be developed safely without increasing offsite flood risk. Application of the Exception Test is undertaken in the Level 2 SFRA.
- 2.2 Epsom & Ewell Borough Council is preparing a new local plan that will set out a vision and strategy, together with strategic policies to guide development in the borough until 2040. This study supports the local plan by sequentially testing the potential allocations for housing or employment uses in terms of their risk from flooding. It has been prepared to support the Regulation 18 stage Local Plan.

## 3 Local Flood Risk Context

- 3.1 Epsom & Ewell Borough Council's level 1 SFRA was updated in 2018. This assessed flood risk from various sources of flooding and identified the following for the borough.
- 3.2 A relatively small percentage of the borough is at risk of flooding from rivers. However, the urbanised areas, steep topography and potential rainfall runoff from the Epsom Downs introduces a relatively high susceptibility to surface water, groundwater and localised flooding in certain parts of the borough.

- 3.3 The watercourses in the borough that pose significant flood risk to buildings and infrastructure are the Hogsmill River and its tributaries, which include the Bonesgate Stream, the Horton Stream, Green Lanes Stream and Ewell Court Stream. Most of the Ewell Court Stream and lengths of Green Lanes Stream are culverted. These water courses are predominantly urban. The Hogsmill River, Green Lanes Stream and Ewell Court Stream all either originate in built-up areas or have their source just outside development. The exception to this is the Horton Stream, which largely flows through open space to the west of Epsom.
- 3.4 Fluvial flood risk mapping indicates that a relatively small proportion of the borough is susceptible to river flooding, with the extents of Flood Zones 2, 3a and 3b being largely confined to the areas adjoining the river corridors.
- 3.5 The main cause of flood risk in the Borough is from surface water flooding. This mainly occurs during intense or prolonged rainfall and is a result of the inability of the sewer network to cope, surface runoff from the chalk in the south of the Borough on to the clay underlying the urbanised north of the borough and groundwater flooding from the chalk.

## 4 Land Availability Assessment (LAA)

- 4.1 Potential sites for allocation within the local plan have been identified in the LAA. The LAA assesses the development potential of land within the borough and identifies sites which are considered to be 'deliverable' and 'developable'.<sup>1</sup> In line with the Sequential test, flood risk was considered as part of the assessment of LAA sites. Those sites that lie entirely within Flood Zones 2 or 3 or where there would be no safe access due to flood risk were considered unsuitable and excluded from further assessment. However, some sites where only part of the area is within Flood Zones 2 or 3 were considered to offer some potential for development subject to further assessment.
- 4.2 Sites which were considered to be deliverable and developable have been included in the sequential test, alongside Green Belt sites to ensure a thorough assessment of all known potential development sites within the borough.

## 5 Sequential Test Methodology

- 5.1 To conduct the Sequential Test, all the relevant LAA sites were assessed against the risk of flooding from fluvial flooding, surface water flooding, groundwater flooding and reservoir flooding using various sources of data (see data sources below).
- 5.2 The level of risk for each site was scored using the table below. For example, if a small part of a site was within an area at risk from a 1 in 30 year surface water flood event, it would score 4. The worst risk was recorded for each site, for each category of flood risk with associated commentary.

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<sup>1</sup> As defined in the NPPF, a deliverable site is available now, offers a suitable location for development and has a realistic prospect that housing will be delivered on the site within five years. A developable site is one in a suitable location for housing development with reasonable prospect that it will be available and could be viably developed at the point envisaged. These are sites which have potential to be delivered within six to 15 years.

Table to show risk scoring

Type of Flood Risk	Score	Level of Risk
<b>Fluvial Flooding (Flood Zones)</b>		
Flood zone 3b (significant part of site)	5	Highest Risk
Flood zone 3b (part of site)	4	
Flood Zone 3a	3	
Flood Zone 2	2	
Flood Zone 1	1	Lowest Risk
<b>Surface Water Flooding</b>		
1 in 30 year (significant part of site)	5	Highest Risk
1 in 30 year (moderate part of the site)	4.5	
1 in 30 year (small part of the site)	4	
1 in 100 year (significant part of the site)	3.5	
1 in 100 year (moderate part of the site)	3	
1 in 100 year (small part of the site)	2.5	
1 in 1000 year (significant part of the site)	2	
1 in 1000 year (moderate part of the site)	1.5	
1 in 1000 year (small part of the site)	1	
N/A	0.5	Lowest Risk
<b>Groundwater Flooding</b>		
Significant part of site	4	Highest Risk
Moderate part of site	3	
Limited part of site	2	
N/A	1	Lowest Risk

5.3 The sites were then ranked from the least risk (Rank 1) to the most risk (Rank 93). The priority in terms of the greatest risk was given to fluvial flooding (for national policy reasons), followed by surface water flooding and then groundwater flooding.

#### Data Sources

5.4 The following sources of data have been used to inform the sequential test:

#### 5.5 Flood Zones

The EA produces and regularly updates maps of flood risk from fluvial sources. These are categorised into Flood zones 1, 2, 3a and 3b with flood zone 1 having the lowest probability of flooding while flood zone 3 having the highest. Zone 3b is classified as the 'functional floodplain' and is deemed to be the most at risk. The most recent flood zone mapping produced by the EA (November 2022) has been used to inform the sequential test.

#### 5.6 Surface Water

The EA also produces and regularly updates maps of flood risk from surface water. 'Surface runoff' is defined as "the flooding that takes place from the 'surface runoff' generated by rainwater (including snow and other precipitation) which: (a) is on the surface of the ground (whether or not it is moving) and (b) has not yet entered a watercourse, drainage system or public sewer." The most recent flood zone mapping produced by the EA (November 2022) has been used to inform the sequential test.

### **5.7 Groundwater**

Groundwater emergence maps were used to inform the SFRA. The maps were produced as part of a groundwater flooding scoping study, commissioned by Defra and set out to provide information on the scale, distribution and nature of groundwater flooding in England. The maps have been produced at a scale suitable for national assessment and, as such, do not pinpoint sites where groundwater flooding will occur. Instead, they define broad areas of risk based on geology and topography. Properties within the zone could be expected to experience anything from groundwater emergence into cellars to surface flooding and incursion into properties. The groundwater emergence maps included in the SFRA have been used to inform the sequential test.

### **5.8 Reservoir Flooding**

The EA provides mapping on the extent of potential reservoir flooding. This shows that the only risk from this source of flooding within the borough is from the Great Stew Pond, which only impacts on one site. Details of this are included in the assessment commentary.

## 6 Sequential Test Findings

6.1 In total 93 sites were included in the sequential test. Their assessment and rankings are included in the tables below:

Sequential Test Ranking and Assessment Table

Rank	Site Name	LAA Reference	Deliverable, developable or Green Belt	Flood Zone	Surface Water	Groundwater	Comments
1	22-24 Dorking Road	WOO022	Deliverable	1	0.5	1	No identified flood risk.
2	5 Ruxley Lane, Ewell	EWC001	Developable	1	0.5	1	No identified flood risk.
3	Garages Morland Court, Ardrossan Gardens	CUD002	Developable	1	0.5	1	No identified flood risk.
4	Parking at 54 Gainsborough Road	COU021	Developable	1	0.5	1	No identified flood risk.
5	Gainsborough Road estate, Epsom	COU020	Developable	1	0.5	1	No identified flood risk.
6	Land south of Oak Glade	STA008	Green Belt	1	0.5	1	No identified flood risk.
7	Land north of Reigate Road inc. Mid Surrey Farm	NON014	Green Belt	1	0.5	1	No identified flood risk.
8	Downs Farm (south parcel), Reigate Road	COL024	Green Belt	1	0.5	1	No identified flood risk.
9	Land near Downs Road (east parcel)	COL023	Green Belt	1	0.5	1	No identified flood risk.
10	Clear Heights, Downs Road	COL022	Green Belt	1	0.5	1	No identified flood risk.
11	Land near Downs Road (south parcel)	COL021	Green Belt	1	0.5	1	No identified flood risk.
12	Land near Downs Road (south-west parcel)	COL020	Green Belt	1	0.5	1	No identified flood risk.
13	Land East Burgh Heath Road	COL019	Green Belt	1	0.5	1	No identified flood risk.
14	Land to west of Burgh Heath Road	COL017	Green Belt	1	0.5	1	No identified flood risk.
15	Corner of Kiln Lane & East Street	TOW043	Developable	1	0.5	4	Site within groundwater emergence zone.
16	Etwelle House, Station Road	NON001	Developable	1	0.5	4	Site within groundwater emergence zone.
17	106-112 East Street	EWE016	Developable	1	0.5	4	Site within groundwater emergence zone.

18	25 Alexandra Road Epsom Surrey KT17 4BP	COL006	Developable	1	0.5	4	Site within groundwater emergence zone.
19	Kingswood School	STA006	Deliverable	1	0.5	1	
20	Builders Yard Mill Road	COL001	Developable	1	0.5	4	Site within groundwater emergence zone.
21	7 Station Road, Stoneleigh	AUR004	Deliverable	1	0.5	1	
22	35 Alexandra Road	COL016	Deliverable	1	0.5	4	Site within groundwater emergence zone.
23	Land R/O The Albion Public House (Mccaffertys Bar)	TOW008	Developable	1	1	1	Very small, almost negligible part of the site in SW 1-1000
24	Petrol Station at corner of Chessington & Ruxley Lane	RUX015	Developable	1	1	1	Very small, almost negligible part of the site in SW 1-1000
25	442 Chessington Road and Coach Park	RUX006	Developable	1	1	1	Very small, almost negligible part of the site in SW 1-1000
26	Land off Cuddington Glade	STA013	Green Belt	1	1	1	Small part of the site in SW 1-1000.
27	140-142 Ruxley Lane West Ewell Surrey KT19 9JS	RUX023	Deliverable	1	1	1	Small north eastern part of the site in SW 1-1000
28	The Wells Centre, Spa Drive	STA004	Deliverable	1	1	1	Small central part of the site in SW 1-1000
29	Eclipse Business Park, West Hill	STA001	Developable	1	1	1	Small central part of the site in SW 1-1000
30	32 Waterloo Road and BRM Coachworks	TOW013	Developable	1	1	4	Very small, almost negligible part of the site in SW 1-1000. Site within groundwater emergence zone.
31	Epsom Baptist Church	TOW009	Developable	1	1	4	Very small, almost negligible part of the site in SW 1-1000. Site within groundwater emergence zone.
32	Conservative Club, Epsom Club and Church	TOW002	Developable	1	1	4	Very small, almost negligible part of the site in SW 1-1000. Site within groundwater emergence zone.
33	NESCOT Grounds 1	NON029	Green Belt	1	1	4	Very small area of the site in SW 1-1000. Site within groundwater emergence zone.



34	Spread Eagle Shopping Centre	TOW016	Developable	1	1	4	Small corner of site in SW 1-1000. Site within groundwater emergence zone.
35	Hope Lodge car park	TOW011	Developable	1	1	4	Small area of the site in SW 1-1000. Site within groundwater emergence zone.
36	79-85 East Street, Epsom	TOW017	Deliverable	1	1	4	Small part of site in SW 1-1000. Site within groundwater emergence zone.
37	Behind Texaco Petrol Station, Ruxley Lane	RUX007	Developable	1	1.5	1	Small area to the rear of the site in SW 1-1000.
38	Crane Court/Rowden Rd (Garage)	RUX005	Deliverable	1	1.5	1	Approx one third of the site in SW 1-1000.
39	24-28 West Street, Epsom, KT18 7RJ	TOW15	Deliverable	1	2.5	1	Very small, almost negligible part of the site in SW 1-100.
40	Noble Park Extension	STA019	Green Belt	1	2.5	1	Very small, almost negligible part of the site in SW 1-100. Slightly larger area in SW 1-1000.
41	105-107 College Road and adjoining land	NON019	Green Belt	1	2.5	1	Small part of site in SW 1-100. Around half the site in SW 1-1000.
42	Land rear of Rowe Hall, Salisbury Road	AUR001	Deliverable	1	2.5	2.5	Very small part of the site in SW 1-100.
43	107-111 East Street, Epsom	TOW044	Deliverable	1	2.5	4	Very small, almost negligible part of the site in SW 1-100. Site within groundwater emergence zone.
44	Finachem House, 2-4 Ashley Road	TOW020	Deliverable	1	2.5	4	Very small, almost negligible part of the site in SW 1-100. Site within groundwater emergence zone.
45	31-37 East Street, Majestic Wines	TOW056	Developable	1	2.5	4	Very small area of the site in SW 1-100. Site within groundwater emergence zone.
46	Public House (Toby Carvery) 45 Cheam Road	NON002	Developable	1	2.5	4	Very small area of the site in SW 1-100. Around a quarter of the site in SW 1-1000. Site within groundwater emergence zone.

47	Ewell Autoway & Tesco Express, 26 Reigate Road	EWE004	Developable	1	2.5	4	Very small area of the site in SW 1-100. Around a quarter of the site in SW 1-1000. Site within groundwater emergence zone.
48	Health Clinic and Ambulance Station	TOW006	Deliverable	1	2.5	4	Small part of the site in SW 1-100. Around a third of the site in SW 1-1000. Site within groundwater emergence zone.
49	Richards Field car park, Chessington Road	WEW004	Developable	1	3	1	Southern part of the site in SW 1-100
50	Land at West Park Hospital (south parcel)	STA017	Green Belt	1	4	1	Very small area of site in SW 1-30
51	Manor Park (old cricket ground)	STA011	Green Belt	1	4	1	Very small area of site in SW 1-30
52	Hollywood Lodge	STA010	Green Belt	1	4	1	Very small area of site in SW 1-30
53	Downs Farm (north parcel), Reigate Road	NON016	Green Belt	1	4	1	Very small area along part of the edge of the site in SW 1-30
54	Drift Bridge Farm (whole site)	NON021	Green Belt	1	4	1	Very small area in the north of the site in SW 1-30, small areas in the north and in the south of the site in SW 1-1000
55	Land at West Park Hospital (north parcel)	STA018	Green Belt	1	4	1	Very small area of site in SW 1-30, approx half the site in SW 1-1000. Environment Agency maps shows risk of reservoir flooding.
56	Clarendon Park	RUX020	Green Belt	1	4	1	Small part of the site in SW 1-30. Significant part in SW 1-1000
57	Horton Hospital	COU036	Green Belt	1	4	1	Small area of site in SW 1-30
58	land south of West Cottage, Horton Lane	COU028	Green Belt	1	4	1	Small area to the east in SW 1-30
59	Horton Haven	COU027	Green Belt	1	4	1	Small part of the site in SW 1-30
60	Hook Road Arena	COU026	Green Belt	1	4	1	Small part to the north east of the site in SW 1-30
61	Land At Chantilly Way, Epsom	COU024	Green Belt	1	4	1	Small area in the north of the site in SW 1- 30

62	Land at Horton Lane	COU023	Green Belt	1	4	1	Small parts to the north of the site in SW 1-30
63	TK Maxx	TOW007	Developable	1	4	1	Small part of site in SW 1-30, half of site in SW 1-1000
64	Cox Lane Community Centre	RUX001	Developable	1	4	1	Small areas to the south and west of the site in SW 1-30. Significant proportion of the site in SW 1-1000.
65	Garages at Somerset Close & Westmorland Close	COU045	Deliverable	1	4	1	Small area of northern part of site in SW 1-30
66	Land near Downs Road (west parcel)	WOO019	Green Belt	1	4	3	Very small, almost negligible part of the site in SW 1-30. Moderate part of site in Groundwater emergence zone.
67	Banstead Road	NON038	Green Belt	1	4	3	Very small area on the western edge of the site in SW 1-30. Moderate part of site in groundwater emergence zone.
68	The Ashley Centre (full site)	TOW024	Developable	1	4	3	Small parts of the site in SW 1-30. Moderate part of the site in groundwater emergence zone.
69	Former Dairy Crest Site, 4 Alexandra Road	COL002	Deliverable	1	4	4	Very small, almost negligible part of the site in SW 1-30. Site within groundwater emergence zone.
70	1 Beaufort Way	STO0008	Developable	1	4	4	Very small part of southern edge of site in SW 1-30. Site within groundwater emergence zone.
71	Gas Works Site, East Street	TOW001	Developable	1	4	4	Small part of site in SW 1-30. Site within groundwater emergence zone.
72	Depot Road & Upper High Street Car Parks	TOW004	Developable	1	4	4	Small part of site in SW 1-30. Site within groundwater emergence zone.

73	Land North of Langley Bottom Farm	WOO020	Green Belt	1	4	4	Small area running through centre of the site in SW 1-30. Site within groundwater emergence zone.
74	Downside House 1 Downside Epsom Surrey KT18 5ET	TOW054	Deliverable	1	4	4	Very small, almost negligible part of the site in SW 1-30. Area in the northern part of the site in SW 1-1000. Site within groundwater emergence zone.
75	Hook Road Car Park	TOW022	Developable	1	4	4	Western edge of the site in SW 1-30. Site within groundwater emergence zone.
76	University of Creative Arts Campus	TOW051	Deliverable	1	4	4	Very small, almost negligible part of the site in SW 1-30. Around one third of the site in SW 1-1000. Site within groundwater emergence zone.
77	64 South Street, Epsom	WOO004	Deliverable	1	4	4	Very small, almost negligible part of the site in SW 1-30. Around one third of the site in SW 1-1000. Site within groundwater emergence zone.
78	TA Centre Welbeck Close	EWE001	Developable	1	4	4	Small area of site in SW 1-30, slightly larger area in SW 1-1000. Site within groundwater emergence zone.
79	Kiln Lane	TOW045-050	Developable	1	4	4	Small areas in SW 1-30. Areas to the west of the site in SW 1-1000. Site within groundwater emergence zone.
80	Swail House	TOW010	Developable	1	4	4	Small part of site in SW 1-30, half of site in SW 1-1000. Site within groundwater emergence zone.
81	East Street Waterworks	TOW014	Developable	1	4	4	Small part of site in SW 1-30, most of site within SW 1-1000. Site within groundwater emergence zone.

82	Rainbow Leisure Centre Car Park	TOW023	Developable	1	4	4	Small area of the car park in SW 1-30. Significant part of the site in SW 1-1000. Site within groundwater emergence zone.
83	Homebase 23 Reigate Road Ewell Surrey KT17 1PE	EWE005	Developable	1	4	4	Small area in the norther part of the site in SW 1-30, almost all of the site in SW 1-1000. Site within groundwater emergence zone.
84	20 Hook Road (Solis House)	TOW055	Developable	1	4	4	Small area of the site in SW 1-30. Entire site within SW 1-1000. Site within groundwater emergence zone.
85	London Road Lodge	STO007	Deliverable	1	4	4	Small part of site in SW 1-30. All of site in SW 1-1000. Site within groundwater emergence zone.
86	Town Hall & Public Car Park	TOW021	Developable	1	4.5	4	Part of the site in SW 1-30. Around half the site in SW 1-1000. Site within groundwater emergence zone.
87	NESCOT s. ground (2) -Land at Priest Hill, Ewell	NON013	Green Belt	3	4	4	Small part of the site adjacent to Cheam Road in FZ3a, very small area in SW 1-30. Site within groundwater emergence zone.
88	Land west of Ewell By-Pass	EWE012	Developable	3	4.5	4	Approx one quarter of the site on the northern part of the site FZ3a and SW 1-30. Site within groundwater emergence zone.
89	47 Cheam Road Ewell Surrey KT17 3EB	NON003	Developable	3	4.5	4	Northern tip of site slightly in FZ3a, northern half in SW 1-30 and all of site in SW 1-1000. Site within groundwater emergence zone.
90	Hatch Furlong Nursery, east of Ewell By-Pass	NON004	Developable	3	4.5	4	Approx one third of the northern part of the site in FZ3a and SW 1-1000. Northern tip of site in SW 1-30. Site within groundwater emergence zone.

91	3 Roy Richmond Way	COU012	Developable	4	2.5	4	Small part of the western edge of site affected by FZ3. Southern part of the site in SW 1-100. Around half the site in SW 1-1000. Site within groundwater emergence zone.
92	Longmead Industrial Estate	COU004-016	Developable	4	4	4	Western part of the site along Longmead Road affected by FZ3b. Small areas to the south west in SW 1-30. Site within groundwater emergence zone.
93	Scotts Farm Road	RUX004	Developable	4	4	1	Eastern tip of site FZ3b & in SW 1-30